

## Environmental Protection Agency

## § 1065.672

### § 1065.667 Dilution air background emission correction.

\* \* \* \* \*

(b) You may determine the total flow of dilution air by a direct flow measurement. In this case, calculate the total mass of background as described in § 1065.650(b), using the dilution air flow,  $n_{dil}$ . Subtract the background mass from the total mass. Use the result in brake-specific emission calculations.

\* \* \* \* \*

### § 1065.670 NO<sub>x</sub> intake-air humidity and temperature corrections.

See the standard-setting part to determine if you may correct NO<sub>x</sub> emis-

sions for the effects of intake-air humidity or temperature. Use the NO<sub>x</sub> intake-air humidity and temperature corrections specified in the standard-setting part instead of the NO<sub>x</sub> intake-air humidity correction specified in this part 1065. If the standard-setting part allows correcting NO<sub>x</sub> emissions for intake-air humidity according to this part 1065, first apply any NO<sub>x</sub> corrections for background emissions and water removal from the exhaust sample, then correct NO<sub>x</sub> concentrations for intake-air humidity using one of the following approaches:

(a) Correct for intake-air humidity using the following equation:

$$x_{NOxcor} = x_{NOxuncor} \cdot (9.953 \cdot x_{H2O} + 0.832) \quad \text{Eq. 1065.670-1}$$

#### Example:

$$x_{NOxuncor} = 700.5 \text{ } \mu\text{mol/mol}$$

$$x_{H2O} = 0.022 \text{ mol/mol}$$

$$x_{NOxcor} = 700.5 \cdot (9.953 \cdot 0.022 + 0.832)$$

$$x_{NOxcor} = 736.2 \text{ } \mu\text{mol/mol}$$

(b) Develop your own correction, based on good engineering judgment.

EFFECTIVE DATE NOTE: At 73 FR 33738, June 30, 2008, § 1065.670 was amended by revising the introductory text, effective July 7, 2008. For the convenience of the user, the revised text is set forth as follows:

### § 1065.670 NO<sub>x</sub> intake-air humidity and temperature corrections.

See the standard-setting part to determine if you may correct NO<sub>x</sub> emissions for the effects of intake-air humidity or temperature. Use the NO<sub>x</sub> intake-air humidity and temperature corrections specified in the standard-setting part instead of the NO<sub>x</sub> intake-air humidity correction specified in this part 1065. If the standard-setting part does not prohibit correcting NO<sub>x</sub> emissions for intake-air humidity according to this part 1065, first apply any NO<sub>x</sub> corrections for background emissions and water removal from the exhaust sample, then correct NO<sub>x</sub> concentrations for intake-air humidity. You may use a time-weighted mean combustion air humidity to calculate this correction if your combustion air humidity remains within a tolerance of  $\pm 0.0025$  mol/mol of the mean value over the test interval. For intake-air humidity correction, use one of the following approaches:

### § 1065.672 Drift correction.

(a) *Scope and frequency.* Perform the calculations in this section to determine if gas analyzer drift invalidates the results of a test interval. If drift does not invalidate the results of a test interval, correct that test interval's gas analyzer responses for drift according to this section. Use the drift-corrected gas analyzer responses in all subsequent emission calculations. Note that the acceptable threshold for gas analyzer drift over a test interval is specified in § 1065.550 for both laboratory testing and field testing.

(b) *Correction principles.* The calculations in this section utilize a gas analyzer's responses to reference zero and span concentrations of analytical gases, as determined sometime before and after a test interval. The calculations correct the gas analyzer's responses that were recorded during a test interval. The correction is based on an analyzer's mean responses to reference zero and span gases, and it is based on the reference concentrations of the zero and span gases themselves. Validate and correct for drift as follows:

(c) *Drift validation.* After applying all the other corrections—except drift correction—to all the gas analyzer signals, calculate brake-specific emissions according to § 1065.650. Then correct all